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June 30, 2005

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Re:		
	Inventors:	Ali N. Saleh; H. Michael Zadikian; Zareh Baghdasarian; Vahid Parsi
	Title:	VIRTUAL PATH RESTORATION SCHEME USING FAST DYNAMIC MESH RESTORATION IN AN OPTICAL NETWORK
	Assignee:	Cisco Technology, Inc.
	Application No.:	09/751,653
	Filing Date:	December 30, 2000
	Group Art Unit:	2662
	Examiner:	Hanh N. Nguyen
	Attorney Docket No.:	CIS0008C2US

Dear Sir:

Transmitted herewith are the following documents in the above-identified application:

(1) Return Receipt Postcard
(2) This Transmittal Letter (1 page, in duplicate)
(3) Appeal Brief (11 pages)

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Cyrus Bharucha — 2005 June 30
Attorney for Applicant — Date of Signature

Respectfully submitted,

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors:	Ali N. Saleh; H. Michael Zadikian; Zareh Baghdasarian; Vahid Parsi		
Assignee:	Cisco Technology, Inc.		
Title:	VIRTUAL PATH RESTORATION SCHEME USING FAST DYNAMIC MESH RESTORATION IN AN OPTICAL NETWORK		
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Austin, Texas
June 30, 2005

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APPEAL BRIEF

Dear Sir:

This brief is submitted in support of the Notice of Appeal filed on May 5, 2005 by Appellant to the Board of Patent Appeals and Interferences, appealing the final rejection of claims 1, 146-149, 156-160, and 167 in the Office Action of February 17, 2005 ("the Office Action"). Appellant notes that the Notice of Appeal was received by the U.S. Patent and Trademark Office on May 9, 2005, thereby giving Appellant a period for filing set to expire on July 9, 2005 under 37 C.F.R. § 41.37(a)(1) and MPEP § 512.

Please charge deposit account No. 502306 for the fee of $500.00 associated with this appeal brief. Please charge this deposit account for any additional sums which may be required as part of this appeal.

REAL PARTY IN INTEREST

The real party in interest on this appeal is the assignee, Cisco Technology, Inc.

RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences related to this application.

STATUS OF CLAIMS

Claims 1 and 146-167 are pending in the application.

Claims 2-145 have been canceled.

Claims 150-155 and 161-166 are under objection. The Office Action indicates that these claims present allowable subject matter.

Claims 1, 146-149, 156-160, and 167 are under rejection.

Appellant appeals the rejections of claims 1, 146-149, 156-160, and 167.

STATUS OF AMENDMENTS

No amendments have been filed subsequent to the final rejection in the Office Action of February 17, 2005.

SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claim 1 is directed to a method for restoring a virtual path in an optical network. The method includes detecting a port failure of a first port within a link between a first node and a second node of the virtual path. *See, for example,* Specification at pp. 7-9; FIGS. 1, 2, and 3A. The method also includes restoring the virtual path to a second port using the first node. The restoring is performed in response

to a determination that at least one alternate port is available within the link. *See, for example, id.* at p. 9-10; FIG. 3A, block 312. The second port is among at the least one alternate ports. The restoring includes transferring a restoration message packet between the first node and the second node. *See, for example, id.* at p. 9; FIG. 3A, block 314. *See also,* pp. 10-14. The restoring also includes identifying the second port within the link. The identifying is performed in response to the transferring. *See, for example, id.* at p. 10; FIG. 3B, block 345; FIG. 3C, block 355. Claims 146-149 depend on independent claim 1.

Independent claim 156 is directed to a machine-readable medium. As set forth in the preamble, a plurality of instructions executable by a machine is embodied in the machine-readable medium. When executed, the plurality of instructions causes the machine to perform a method for restoring a virtual path in an optical network. The method includes a detecting and a restoring as described above in relation to claim 1. The restoring includes a transferring and an identifying as described above in relation to claim 1. Claims 157-160 depend on independent claim 156.

Independent claim 167 is directed to a system. The system includes means for a detecting as described above in relation to claim 1. The system also includes means for a restoring as described above in relation to claim 1. The means for restoring includes means for a transferring as described above in relation to claim 1 and means for an identifying as described above in relation to claim 1.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1, 146, 156, 157, and 167 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,959,972 issued to Hamami ("*Hamami*").

Claims 147-149 and 158-160 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hamami* in view of U.S. Patent No. 5,987,526 issued to Morales ("*Morales*").

THE REJECTIONS UNDER 35 U.S.C. § 102(e)

Claims 1, 146, 156, 157, and 167 stand rejected under § 102(e) as being anticipated by *Hamami*. However, in rejecting claim 1, the Office Action ignores several limitations of the pending claims.

For example, the Office Action ignores the limitation in claim 1 of identifying the second port within the link in response to the transferring. Appellant respectfully submits that even if the portions of *Hamami* cited in the Office Action correspond to the limitations of "identifying" and "transferring" (and Appellant does not concede such correspondence), the *Hamami* system does not identify the second port "in response to" the transferring. Appellant sees no discussion, teaching, or suggestion in *Hamami* of this limitation of claim 1.

Further, the Office Action ignores the limitation in claim 1 of "a determination that" at least one alternate port is available within the link. The *Hamami* system relies on the presence of separate parallel communication ports and links available for redundancy purposes. *Hamami* at col. 4, lines 21-24. *Hamami* therefore does not require any determination that at least one alternate port is available. Determining whether an alternate communications port is available in *Hamami* would be unnecessary and pointless, since the *Hamami* system includes pre-configured alternate ports and links. Accordingly, *Hamami* does not disclose any determination that at least one alternate port is available. This limitation of claim 1 is therefore absent from the cited reference.

Still further, Appellant respectfully submits that the particular parts of *Hamami* that the Office Action has relied upon have not been designated as nearly as practicable, and the pertinence of the reference has not been clearly explained, both as required by 37 C.F.R. § 1.104(c)(2). See also MPEP § 706.02(j).

For at least the foregoing reasons, Appellant submits that independent claim 1 is allowable under § 102(e). At least for similar reasons, independent claims 156 and 167 are also allowable under § 102(e). Claim 146 depends on claim 1, and claim 157 depends

on claim 156. Claims 146 and 157 are therefore also allowable under § 102(e) at least for similar reasons, being dependent upon allowable base claims.

THE REJECTIONS UNDER 35 U.S.C. § 103(a)

Claims 147-149 and 158-160 stand rejected under § 103(a) as being unpatentable over *Hamami* in view of *Morales*. Appellant respectfully submits that the Office Action fails to state a *prima facie* case of obviousness under § 103(a).

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.

MPEP § 2143 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)). Further, "The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done." *Id.*, § 706.02(j), (citing *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985)).

The Rejections Lack a Suggestion or Motivation for the Proposed Modification or Combination

As noted in the Office Action, *Hamami* does not disclose restoring a virtual path in less than particular time limitations, as set forth in claims 147-149 and 158-160. Office Action at p. 3. With reference to *Morales*, the Office Action proposes that it would have been obvious to one of ordinary skill in the art to modify *Hamami* to meet these time limitations. *Id.* However, the Office Action does not provide any suggestion or motivation for such a modification, either in the cited references themselves or in the knowledge of one of ordinary skill in the art. The Office Action also does not provide any suggestion or motivation for the proposed combination of references, either in the

cited references themselves or in the knowledge of one of ordinary skill in the art. The Office Action thus does not meet the initial burden of providing some suggestion of the desirability of the proposed modification or combination. Accordingly, Appellant submits that the rejection under § 103 relies on improper combination or modification of references, and that the Office Action thus fails to state a *prima facie* case of obviousness.

The Cited Art Fails to Teach or Suggest
All the Limitations of the Claims

Moreover, Appellant respectfully submits that, even if combined, *Hamami* and *Morales* in combination still fail to teach all limitations of Appellant's claims. Regarding claim 147, at least three limitations are not disclosed by *Hamami* or by *Morales*, whether taken individually or in combination.

First, claim 147 depends directly on claim 1. Thus, the arguments noted above with respect to the rejection of claim 1 under § 102(e) apply with equal force to the rejection of claim 147 under § 103(a). As noted above, *Hamami* does not disclose the limitation of identifying a second port within a link in response to a transferring. Appellant also sees no discussion, teaching, or suggestion in *Morales* of this limitation. This limitation is therefore not disclosed by *Hamami* or by *Morales*, taken either separately or in combination.

Second, as also noted above, *Hamami* does not disclose the limitation of a determination that at least one alternate port is available within a link. This limitation is also not disclosed in *Morales*. The system of *Morales* relies on the presence of two alternate communication connections for redundancy: a "first permanent virtual connection" and a "second permanent virtual connection." *Morales* at col. 2, lines 16-22. Examples of these connections are PVC 114 and PVC 115. *Id.* at col. 4, lines 58-65; FIG. 1. When a failure occurs that affects the one of the two connections, the *Morales* system switches to the other connection. *Id.* at col. 2, lines 22-30; col. 5, lines 21-29. This response in *Morales* thus relies on the presence on the second connection as an

alternate communication link. *Morales* therefore does not require, and accordingly does not teach, any determination that at least one alternate port is available. Obviously, given that the second connection in *Morales* is a pre-configured redundant connection, such a determination would be unnecessary and pointless. Accordingly, this limitation is absent from *Morales*—as well as being absent from *Hamami*. As a result, the cited references do not disclose this limitation of claim 147, whether taken separately or in combination.

Third, as noted in the Office Action, *Hamami* does not disclose restoring a virtual path in less than some particular time limitation. Office Action at p. 3. Appellant's claim 147 includes a limitation where "restoring said virtual path to said second port is completed in less than 2 seconds." *Morales* teaches that "it may be preferable to wait for a period of time before rerouting data to the second PVC and the second interface." *Morales*, col. 4, lines 3-41. This waiting is preferred in *Morales* to delay rerouting until after a possible "physical layer protection" or a possible "soaking time." *Id.* Consequently, *Morales* teaches that rerouting is not performed until after a period of time expires—rather than being performed within a period of time. The time periods cited in *Morales* are therefore lower limits on the time for performing a rerouting. The cited material does not discuss, teach, or suggest restoring a virtual path in *less* than any time period, such as the "less than 2 seconds" in claim 147.

The cited art therefore fails to disclose all of the limitations of claim 147. At least for similar reasons, the cited art fails to disclose all of the limitations of claim 148, 149, and 158-160.

Since the rejection under § 103(a) relies on an improper combination or modification of references, and further because the cited references fail to teach all limitations of the claims, Appellant submits that claims 147-149 and 158-160 are allowable under § 103(a).

FORMAL MATTERS

Appellant notes and is grateful for the telephone discussion between the Examiner and the undersigned representative on April 25, 2005 regarding claim 1 and the cited art. During that discussion, no agreement was reached regarding the allowability of claim 1. Appellant also gratefully acknowledges the Examiner's indication in the Office Action of the allowability of claims 150-155 and 161-166.

CONCLUSION

For the above reasons, Appellant respectfully submits that the pending rejections of pending Claims 1, 146-149, 156-160, and 167 are unfounded. Accordingly, Appellant respectfully requests that the Board reverse the rejections of these claims.

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Cyrus Bharucha — 2005 June 30

Attorney for Appellant — Date of Signature

Respectfully submitted,

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CLAIMS APPENDIX

The following is a listing of the claims involved in this appeal.

1. (Previously presented) A method for restoring a virtual path in an optical network, the method comprising:

detecting a port failure of a first port within a link between a first node and a second node of said virtual path;

in response to a determination that at least one alternate port is available within said link, restoring said virtual path to a second port of said at least one alternate port using said first node, wherein said restoring said virtual path to said second port comprises,

transferring a restoration message packet between said first node and said second node; and

identifying said second port within said link in response to said transferring.

146. (Previously presented) The method of claim 1, wherein said restoring said virtual path to said second port further comprises:

initiating a port switch request for said second node,

provisioning said virtual path to said second port, and

updating provisioning information in a node database.

147. (Previously presented) The method of claim 1, wherein said restoring said virtual path to said second port is completed in less than 2 seconds.

148. (Previously presented) The method of claim 1, wherein said restoring said virtual path to said second port is completed in less than 250 milliseconds.

149. (Previously presented) The method of claim 1, wherein said restoring said virtual path to said second port is completed in less than 50 milliseconds.

156. (Previously presented) A machine-readable medium having a plurality of instructions executable by a machine embodied therein, wherein said plurality of instructions, when executed, cause said machine to perform a method for restoring a virtual path in an optical network, the method comprising:

detecting a port failure of a first port within a link between a first node and a second node of said virtual path;

in response to a determination that at least one alternate port is available within said link, restoring said virtual path to a second port of said at least one alternate port using said first node, wherein said restoring said virtual path to said second port comprises,

transferring a restoration message packet between said first node and said second node; and

identifying said second port within said link in response to said transferring

157. (Previously presented) The machine-readable medium of claim 156, wherein said restoring said virtual path to said second port further comprises:

initiating a port switch request for said second node,

provisioning said virtual path to said second port, and

updating provisioning information in a node database.

158. (Previously presented) The machine-readable medium of claim 156, wherein said restoring said virtual path to said second port is completed in less than 2 seconds.

159. (Previously presented) The machine-readable medium of claim 156, wherein said restoring said virtual path to said second port is completed in less than 250 milliseconds.

160. (Previously presented) The machine-readable medium of claim 156, wherein said restoring said virtual path to said second port is completed in less than 50 milliseconds.

167. (Previously presented) A system comprising:

means for detecting a port failure of a first port within a link between a first node and a second node of a virtual path within an optical network;

in response to a determination that at least one alternate port is available within said link, means for restoring said virtual path to a second port of said at least one alternate port using said first node, wherein said means for restoring said virtual path to said second port comprises,

means for transferring a restoration message packet between said first node and said second node; and

means for identifying said second port within said link in response to said transferring.